



Features

- Robust M12 & FAKRA connectors with rich I/O interface
- Dual SIM sockets support WWAN redundancy
- Rich I/O interfaces for wireless, SSD, GPS, WWAN and add-on card expansion
- 9V-36V DC INput with ignition power control
- E-Fuse power protection and supercapacitor-based battery design
- Wide-range voltage GPIO interface
- Wide-range operating temperature from -40°C to 70°C
- Built in Hailo-8 AI accelerator chip (MPT-3100V-AI)
- Optional isolated CANbus thru Mini PCI-E card
- Removable 2.5 device bay for SSD storage

Specifications

System Mainboard	MBT-3101V
CPU Type	Intel® Atom® x7433RE Processor
System Speed	Up to 2.7GHz
Memory	1x DDR5-4800 SO-DIMM socket Up to 16GB
AI Inference Computing Power	On board Hailo-8™ Accelerator, up to 26 TOPS
Front Panel External I/O	1x USB 3.2 Gen2 stack Type-A connector 2x external accessible SIM socket 1x USB Type-C connector with screw-lock 1x Removable 2.5 SSD device bay 1x DB9 female connector for Line-out & MIC-in 1x reset button 1x 14-pin terminal block 6-in & 6-out digital I/O with 24V input and output 2x FAKRA I-code plug Beige color connector for WiFi / Bluetooth 1x FAKRA C-code plug Blue color connector for GPS 2x FAKRA D-code plug Violet color connector for 4G/5G 4x light-pipe for status LED Indicators
Rear Panel External I/O	2x M12 X-code 8P female for GbE LAN1/LAN2 1x terminal block 3-pin for DC INput 1x VGA connector for graphic output (optional) 1x DisplayPort output 1x DB9F connector for 2x CAN FD bus connection (works with extra CAN module) 2x DB9M for COM1 / COM2 2x USB 2.0 Type-A connector 2x light-pipes for LAN status LED Indicators
Expansion Slot	1x M.2 2230 E-Key socket for WLAN & BT connection (PCI-E + USB 2.0 + SMBus) 1x M.2 3042/52 B-Key socket for WWAN (4G/5G) connection (USB3 .2 Gen1 + SMBus) 1x M.2 2280 M-Key socket for SSD device (SATA III) 1x Mini PCI-E full-sized socket for MVB/CAN FD module (PCI-E + USB 2.0 + SMBus) 1x Mini-PCI-E half-size socket for GPS module (USB 2.0 only)
Storage	1x M.2 2280 M-Key socket for SSD (SATA III signal) 1x 2.5 removable device bay for SSD
Power Requirement	In-vehicle battery (84W)
Power Supply	DC INput 9V ~ 36V
Construction	Aluminum
Chassis Color	Black
Mounting Type	Wall mount
Dimensions	250 (W) x 150 (D) x 55 (H) mm 9.84 (W) x 5.9 (D) x 2.16 (H)
Weight	2.5 kg (5.5 lbs)
Operating Temperature	-40°C ~ 70°C (-40°F ~ 158°F) (w/o Fan & SSD) -20°C ~ 55°C (-4°F ~ 131°F) (w/ PCI-E card)
Storage Temperature	-40°C ~ 85°C (-40°F ~ 185°F)

Relative Humidity	10 ~ 95% RH @45°C (non-condensing)
Vibration	Operating/Non-operating (SSD): 2,26 Grms (5~500 Hz) / MIL-STD-810G composite wheeled condition (Z-axis only)
Shock	Operating: Sawtooth: 20G, 11msec (Z-axis) / MIL-STD-810G Non-operating: Sawtooth: 40G, 11 msec (Z-axis) / MIL-STD-810G
Certification	ITXPT, E-Mark-24 CE (EN 62368-1 / EN55032 / EN55035), FCC Class-A
Operating System	Windows 11

Ordering Information

MPT-3100V	MPT-3100V with MBT-3101, Intel® Atom® x7433RE Processor w/ 1x 8GB DDR5-4800, 1x SSD bay, No PSU, No storage (RoHS)
MPT-3100V-AI	MPT-3100V with MBT-3101, Intel® Atom® x7433RE Processor w/ 1x 8GB DDR5-4800, w/ Hailo AI accelerator, 1x SSD bay, No PSU, No storage (RoHS)

Dimensions and Drawing

